CHAPTER 4

Long-Term Forecast of Washington Personal Income

TRENDS IN WASHINGTON PERSONAL INCOME reflect the state's economic, labor force, and population growth. For private businesses, the size and composition of personal income provide a good measure of consumer demand and market potential. For governments, personal income is an important indicator for monitoring state economic conditions, anticipating tax revenues, and assessing the level of services required.

Per capita personal income is often used to assess the economic well being of state residents. Trends in state per capita income reflect local economic changes, poverty status, business climate, standard of living, and the state's obligation and ability to finance the means-tested entitlement programs.

Total Personal Income Trends

In 2008, total personal income in Washington was $227.5 billion (in 2000 dollars). After adjusting for inflation, total state personal income in 2008 was more than four times the 1970 level, increasing at an average annual rate of 3.9 percent over the past three decades (see Table 4-1 on the following page). Total personal income in the state, inflation-adjusted, is projected to grow an average 3.1 percent a year between 2008 and 2030, a significant slowdown from past growth. The anticipated slowdown in total personal income growth reflects expected slower growth in state population and labor force, which act to offset expected productivity and per capita income increases.

Washington State in 2008 accounted for 2.3 percent of total personal income in the nation, a significant increase from the 1.7 percent share in 1970. The share increased because the state economy and population have been expanding faster than for the nation as a whole. In the future economic and population growth in the state is expected to be closer to that for the nation and, by 2030, about 2.4 percent of the nation's total personal income is forecasted to be in the state (see Figure 4-1).

Personal income growth fluctuates with the business cycle. From a long-term perspective, personal income growth in Washington closely mirrors the national trend, but with more erratic and volatile short-term movements (see Figure 4-2). Excluding the cyclical peaks and troughs, state personal income growth has fluctuated within a range of two to four percent. In the future, more stable income growth is expected due to the declining role of cyclical industries and the growing diversification of the state economy.

Table 4-1

Personal Income Trends: Washington and U.S.

Year	Total Personal Income (2000$): Washington (Billions)	Annual Change (%)	U.S. (Billions)	Annual Change (%)	Per Capita Income (2000$): Washington	Annual Change (%)	U.S.	Annual Change (%)
1970	$54.16	0.2%	$3,171.51	2.9%	$15,846	-0.3%	$15,464	1.7%
1971	$54.61	0.8%	$3,276.64	3.3%	$15,841	0.0%	$15,776	2.0%
1972	$57.05	4.5%	$3,479.74	6.2%	$16,552	4.5%	$16,576	5.1%
1973	$61.20	7.3%	$3,692.36	6.1%	$17,599	6.3%	$17,422	5.1%
1974	$63.09	3.1%	$3,683.53	-0.2%	$17,782	1.0%	$17,221	-1.2%
1975	$65.87	4.4%	$3,712.36	0.8%	$18,332	3.1%	$17,173	-0.3%
1976	$69.76	5.9%	$3,885.62	4.7%	$19,034	3.8%	$17,801	3.7%
1977	$72.86	4.4%	$4,040.42	4.0%	$19,373	1.8%	$18,324	2.9%
1978	$79.32	8.9%	$4,247.95	5.1%	$20,389	5.2%	$19,062	4.0%
1979	$84.08	6.0%	$4,381.49	3.1%	$20,829	2.2%	$19,441	2.0%
1980	$86.40	2.8%	$4,430.79	1.1%	$20,726	-0.5%	$19,436	0.0%
1981	$88.66	2.6%	$4,567.65	3.1%	$20,875	0.7%	$19,838	2.1%
1982	$89.10	0.5%	$4,636.28	1.5%	$20,780	-0.5%	$19,949	0.6%
1983	$90.77	1.9%	$4,741.30	2.3%	$20,989	1.0%	$20,218	1.3%
1984	$94.28	3.9%	$5,075.89	7.1%	$21,538	2.6%	$21,453	6.1%
1985	$97.00	2.9%	$5,268.51	3.8%	$21,880	1.6%	$22,070	2.9%
1986	$100.92	4.0%	$5,428.47	3.0%	$22,494	2.8%	$22,534	2.1%
1987	$103.54	2.6%	$5,563.25	2.5%	$22,702	0.9%	$22,888	1.6%
1988	$107.98	4.3%	$5,766.74	3.7%	$23,179	2.1%	$23,510	2.7%
1989	$114.43	6.0%	$5,960.15	3.4%	$23,938	3.3%	$24,065	2.4%
1990	$120.98	5.7%	$6,060.54	1.7%	$24,566	2.6%	$24,185	0.5%
1991	$124.64	3.0%	$6,054.72	-0.1%	$24,601	0.1%	$23,843	-1.4%
1992	$130.53	4.7%	$6,247.14	3.2%	$25,160	2.3%	$24,276	1.8%
1993	$133.55	2.3%	$6,330.22	1.3%	$25,185	0.1%	$24,283	0.0%
1994	$137.52	3.0%	$6,516.18	2.9%	$25,447	1.0%	$24,697	1.7%
1995	$141.79	3.1%	$6,717.99	3.1%	$25,748	1.2%	$25,164	1.9%
1996	$149.28	5.3%	$6,969.95	3.8%	$26,638	3.5%	$25,804	2.5%
1997	$157.81	5.7%	$7,269.29	4.3%	$27,704	4.0%	$26,592	3.1%
1998	$170.62	8.1%	$7,733.70	6.4%	$29,517	6.5%	$27,965	5.2%
1999	$179.85	5.4%	$7,995.86	3.4%	$30,718	4.1%	$28,586	2.2%
2000	$187.87	4.5%	$8,429.32	5.4%	$31,712	3.2%	$29,807	4.3%
2001	$189.53	0.9%	$8,545.21	1.4%	$31,589	-0.4%	$29,907	0.3%
2002	$190.71	0.6%	$8,578.15	0.4%	$31,455	-0.4%	$29,729	-0.6%
2003	$192.19	0.8%	$8,677.57	1.2%	$31,381	-0.2%	$29,790	0.2%
2004	$195.18	1.6%	$8,950.08	3.1%	$31,475	0.3%	$30,437	2.2%
2005	$203.05	4.0%	$9,203.11	2.8%	$32,224	2.4%	$31,018	1.9%
2006	$214.45	5.6%	$9,586.58	4.2%	$33,414	3.7%	$32,002	3.2%
2007	$225.73	5.3%	$9,912.41	3.4%	$34,591	3.5%	$32,779	2.4%
2008	$227.53	0.8%	$9,954.84	0.4%	$34,343	-0.7%	$32,611	-0.5%
FORECAST								
2010	$236.05		$10,217.29		$34,669		$32,819	
2015	$274.12		$11,805.11		$37,524		$36,134	
2020	$323.97		$13,847.51		$41,776		$40,424	
2030	$440.83		$18,717.68		$51,411		$49,957	
Average Annual Growth Rate (%)								
2005-10		3.1%		2.1%		1.5%		1.1%
2010-15		3.0%		2.9%		1.6%		1.9%
2015-20		3.4%		3.2%		2.2%		2.3%
2020-30		3.1%		3.1%		2.1%		2.1%
1970-2007		3.9%		3.1%		2.1%		2.1%
2008-2030		3.1%		2.9%		1.9%		2.0%

Figure 4-1
Washington Real Personal Income and Share of U.S. Total

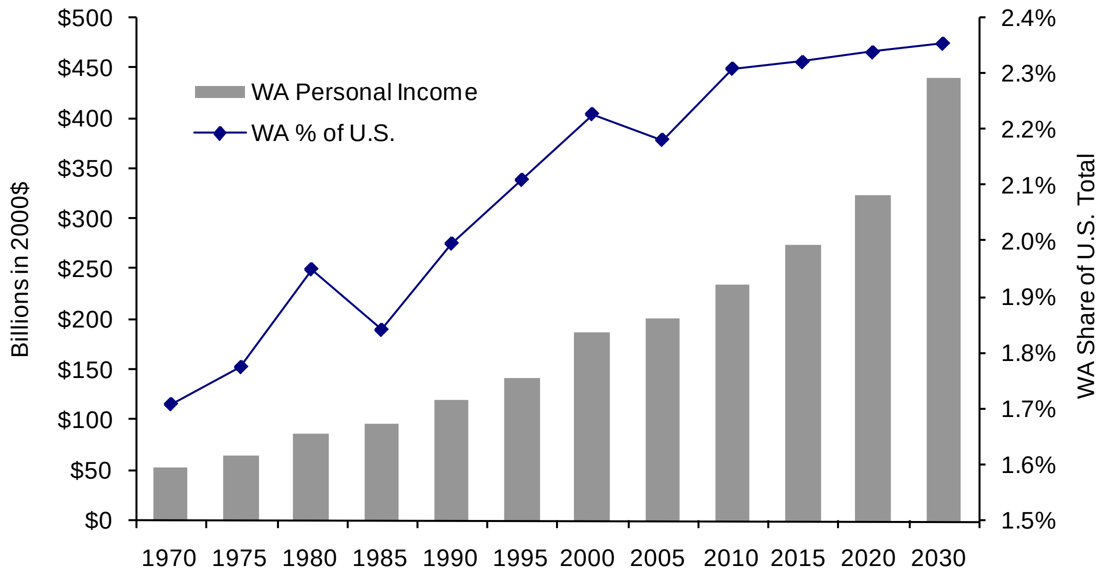

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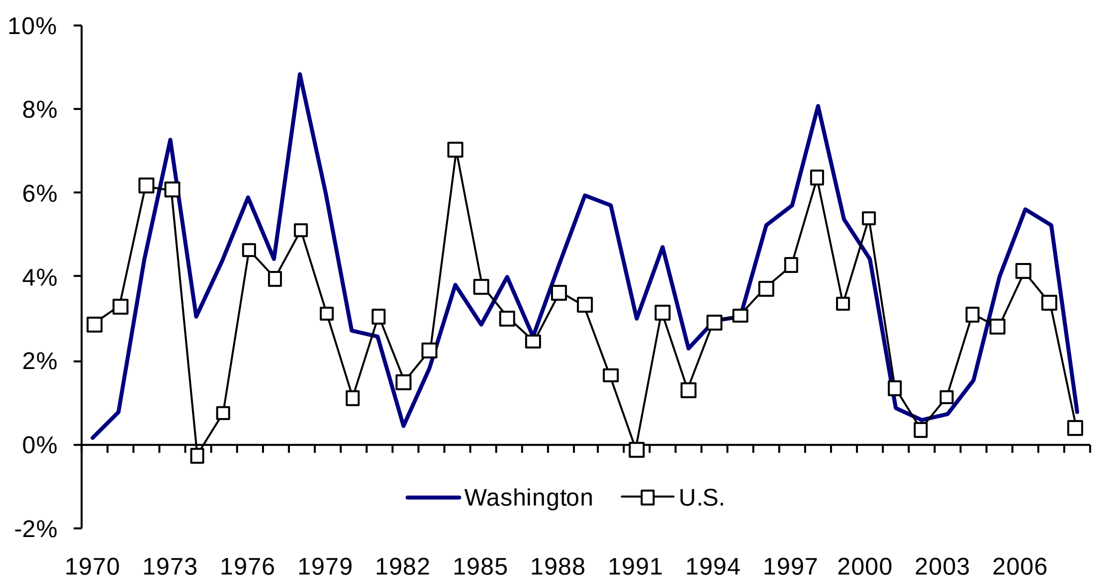
Figure 4-2
Annual Change in Total Real Personal Income



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Income Growth by Component

Personal income, as defined by the Bureau of Economic Analysis, has three major components: (1) earnings (wages, other labor income, and proprietor's income); (2) dividends, interest, and rent; and (3) government transfer payments. In 2008, earnings accounted for 67.4 percent of total personal income in Washington; and dividends/interest/rent and transfer payments represented 19.4 and 13.2 percent of total personal income, respectively. These three income components have been growing at different rates over the past three decades (see Table 4-2).

Table 4-2

Real Income Growth by Component: Washington

Income Components	Average Annual Growth Rate (%) 1970-1975	1975-1980	1980-1985	1985-1990	1990-1995	1995-2000	2000-2008	1970-2008
Total personal income	4.0	5.6	2.3	4.5	3.2	5.8	3.3	4.0
Earnings by place of residence	3.3	5.5	0.7	4.8	3.0	6.4	2.7	3.6
Dividends, interest, and rent	4.2	8.0	7.3	4.0	2.3	5.2	4.2	4.8
Transfer payments	8.3	3.1	4.7	4.0	5.7	3.2	5.1	4.7

- **Earnings.** Washington real total earnings (in 2000 constant dollars) more than tripled from $41.1 billion in 1970 to $153.8 billion in 2008. The average annual growth rate of earnings was 3.6 percent, slightly lower than the 4.0 percent rate for total personal income growth. Earnings growth is subject to cyclical factors. In the first half of the 1990s, growth in total earnings in Washington slowed significantly. The 3.0 percent annual increase from 1990 to 1995 was the lowest earnings growth the state had experienced since the 1982-83 recession; cutbacks in the aerospace industry were the major culprit for the mediocre performance. Earnings growth rebounded strongly to 6.4 percent per year from 1995 to 2000, but then slowed to 2.7 percent in the 2000-2008 period. This slowing was primarily because total earnings declined in 2001, as the recession hit, and grew only slowly over the next two years. In contrast, real earnings grew at over a 4.6 percent per year pace in 2006 and 2007, but slowed to a 0.3 percent pace in 2008 as the economy slowed in the second half of the year.

  Earnings growth has also varied significantly across industries (see Table 4-3 on the following page). Total farm earnings, in real terms, has been relatively flat since 1970, and its share of total earnings in the state declined from 2.9 percent in 1970 to 0.8 percent in 2008. Real earnings from manufacturing more than doubled between 1970 and 2008, but its share of total earnings declined from 23.6 percent to 11.9 percent. Real earnings from manufacturing declined during the 2001-03 period then rebounded in the 2004-2008 period.[1]

  Retail and wholesale trade earnings as a share of total earnings declined from 17.7 percent in 1970 to 11.5 percent in 2008; a change in the classification of eating and drinking establishments was a primary reason for this decline. Real earnings from services increased nearly fourfold over the 1970-2000 period, increasing at an annual rate of 5.0 percent—well above the 3.9 percent growth rate for total earnings during the same period. Services cover a

[1] Note that the industrial data before and after 2001 in Table 4-2 are not strictly comparable. See the notes to Table 4-2.

wide range of sectors and occupations. Earnings growth in services accelerated in the second half of the 1980s, driven by rapid growth in high-paying sectors such as business, health, and management and consulting services. Growth was especially rapid during the second half of the 1990s, as the strong economy and soaring stock option earnings fueled earnings growth in these sectors.

Table 4-3
Growth in Real Earnings by Industry: Washington

	Average Annual Growth Rate (%)							
	1970-1975	1975-1980	1980-1985	1985-1990	1990-1995	1995-2000	1970-2000	2001-2008*
Total Earnings	3.3	5.5	0.7	4.8	3.0	6.4	3.9	2.3
Farm	14.1	-8.1	-7.5	5.9	1.4	0.2	0.7	-0.1
Manufacturing	2.0	7.1	-0.8	4.3	-0.4	3.8	2.3	0.8
Whole & Retail Trade	3.8	5.0	1.3	-1.0	2.7	5.7	2.9	1.9
Services and Other**	3.6	6.3	2.0	7.1	4.1	6.8	5.0	2.6

*Data by industry after 2001 are not comparable to earlier data. Estimates from 1970 to 2001 are based on SIC industrial classifications; estimates from 2001 to 2006 are based on NAICs industrial classifications. Important classification changes under NAICS include the movement of eating establishments from retail trade to services and the creation of an information sector, which includes publishing, software, and telecommunications.

**"Services and Other," in addition to services, includes transportation, communication, utilities; and finance, insurance, and real estate prior to 2001. From 2001 onwards, this group also includes information and food services.

- **Dividends, interest, and rent.** The proportion of total personal income derived from property- and saving-related income sources increased from 14.2 percent in 1970 to 19.4 percent in 2008. The share of income from these sources began to increase in the 1980s due in part to high interest rates early in the decade and soaring property values in the second half of the decade. Between 1990 and 1995, real income from dividends, interest, and rent grew at an annual rate of 2.3 percent in the state, far lower than the long-term average of 4.8 percent, the national economic recession and modest returns in the investment markets played a principal role in this slowdown. From 1995 to 2000, growth rebounded to an average annual rate of 5.2 percent, and eased moderately from 2000 to 2008.

  In the short term, income from dividends, interest, and rent is affected mainly by monetary policies and cyclical conditions. Over the long run, it reflects past earnings and savings behavior of state residents. Future growth of this component of personal income, therefore, depends on the state's success in retaining and attracting households with the ability and propensity to save and invest.

- **Transfer payments.** The importance of transfer payments as a source of personal income has increased over the past three decades, reflecting the impact of the government policies dealing with social security, welfare, unemployment, and farm subsidies. Substantial increases in medical transfer payments have helped to fuel this growth; Medicare and Medicaid transfers, after adjusting for inflation, grew at an average annual rate of 7.4 percent from 1970 to 2007.

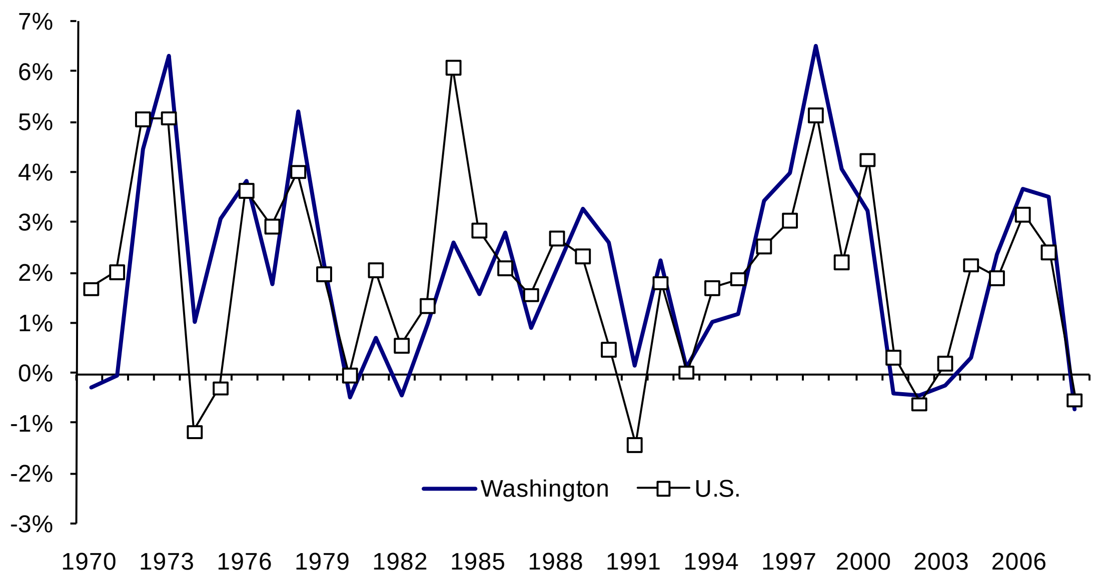
A significant portion of transfer payments is counter-cyclical. In Washington, income derived from income maintenance and unemployment insurance benefit payments accounted for as high as 28.2 percent of total transfer payments during the cyclical trough in 1971, and as low as 10.7 percent in 2007, when the state economy was nearing its cyclical peak.

Per Capita Income Trends

Real per capita income is derived by dividing state total personal income by total population, and then adjusting for inflation using the Implicit Price Deflator (IPD) for personal consumption from the National Income and Product Account (2000 = 1.00). In 2008, real per capita personal income for the state was estimated at $34,343, about 5.3 percent above the national average of $32,611.

Real per capita income in the state doubled over the past thirty-eight years. Between 1970 and 2008, Washington real per capita personal income grew at an average annual rate of 2.1 percent, the same as the average growth for the nation as a whole. Growth across this period fluctuated along with prevailing state economic conditions. During most expansionary periods, state per capita personal income rose faster than the U.S. average. Conversely, per capita income growth in the state was usually below the national trend during recessions or periods of slow economic growth (see Figure 4-3). In the past, growth in the state's aerospace industry played a major role in the growth of Washington personal income.

Figure 4-3
Annual Changes in Real Per Capita Income



After the late-1970s, growth in real per capita personal income has slowed, both in the state and the nation. Nationally, the most commonly cited reason for this was the slowdown in productivity growth; this may have been a result of the abundance of labor as the baby-boomer cohort began entering the workforce. The state economy also suffered from the collapse of non-oil commodity prices during the 1970s and the early 1980s, which hurt its resource-based industries. Other contributing factors included the appreciation of the dollar in relation to foreign currencies in the first half of the 1980s, which hurt the state's export industries; the rise in real interest rates in the 1980s, which lowered demand for some of Washington's durable goods products; and the sudden termination of a Washington Public Power Supply System construction project and loss of shipbuilding jobs in the early 1980s. By 1985, the state per capita income dropped below the national average.

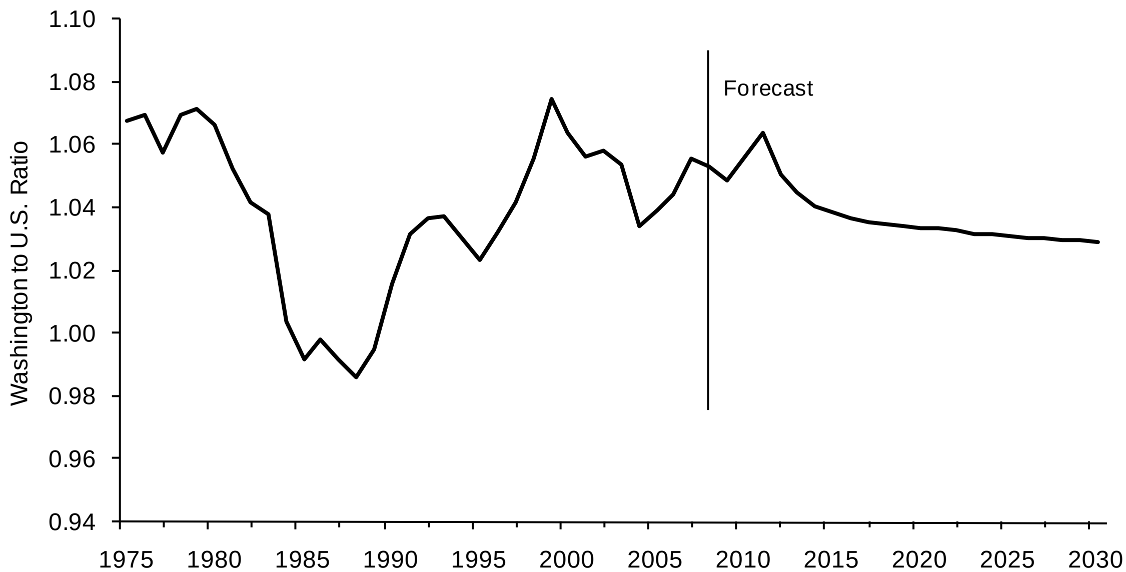
In the second half of the 1980s, Washington had substantial job gains in aerospace and high-tech manufacturing industries and significant growth in the evolving high-wage "knowledge-based" service sectors. In addition, Washington's export industries were stimulated by a decline in the value of dollar relative to other currencies. As a result, real per capita income grew faster in the state than in the nation. By 1990, per capita income in the state was 1.6 percent higher than the national average.

The state's economy was at full strength in 1990, when the U.S. economy was heading into a recession. In 1991, the aerospace sector started cutting back production because of a shrinking commercial aircraft market. The negative effect of the aerospace reduction, however, was offset to a large extent by other prospering sectors (e.g., machinery manufacturing and business services) in the state. Real per capita income growth in Washington did slow in the early 1990s, but the nation as a whole suffered an even greater drop in income growth.

Between 1992 and 1995, the Washington economy stalled due to on-going job losses in aerospace. At the same time the national economic recovery picked up pace, and per capita income growth in the state, again, dropped below the national average. Economic growth in the state accelerated in 1995, as strong national economic growth raised the demand for goods produced in the state. By 2000, the state unemployment rate dipped to 5.2 percent, the employment-to-population ratio rose to a historic high, and per capita income grew rapidly. The recession of 2001 and the slow-paced recovery resulted in real per capita income in the state declined during 2002 and 2003.

State per capita income averaged more than 3 percent above the national level over the past three decades. However, the volatility of certain manufacturing and resource-based industries in the state periodically narrowed or widened the per capita income gap. In 1999, the state per capita income was 7.5 percent above the national average, a record high over the 1975-2008 period (see Figure 4-4 on the following page). Currently, Washington's per capita income is 5.3 percent above the national average.

Figure 4-4
Ratio of Washington to U.S. Per Capita Income



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Outlook for Personal Income Growth in Washington

Over the next 22 years, Washington's economy is expected to continue to diversify, with an industrial profile that more closely resembles that of the nation. This suggests that the state will likely have more stable economic growth, that personal income movements will be less volatile, and that the state's per capita income level may converge toward the national average in the future.

According to the long-term projections, Washington per capita personal income level will converge somewhat, but still remain above the national average over the forecast horizon. Several factors contribute to the comparative strength of Washington's per capita income outlook:

- In the next 22 years, worldwide aircraft demand is expected to remain healthy. Whether the global production model of aerospace production continues is a big unknown.
- Washington will maintain a relatively healthy manufacturing base. For example, agriculture and food products in the state will continue to benefit from improving access to worldwide food markets; and many of these markets are in fast-growing developing countries.
- The state's high-wage durable goods and high-technology industries will benefit from the expected macroeconomic trend toward lower and more stable real interest rates, accompanied by increasing international demand for capital goods.

· A more integrated global economy will help expand state exports and stimulate export-related business activities. In addition, Washington has a geographic advantage in attracting foreign investment.

· Recent business expansion and investment activities suggest that Washington has the critical mass required to attract leading-edge manufacturing, and knowledge-based business service industries. The high-wage jobs offered by these industries will help raise per capita income.

The Office of Financial Management per capita income projection model incorporates these factors in its forecast of per capita income growth in Washington.

Per Capita Income Growth Forecast

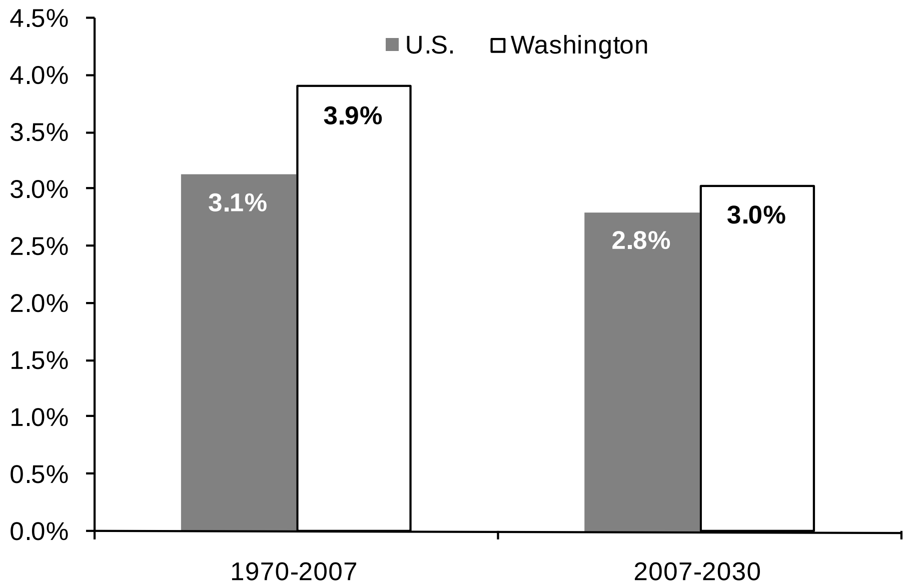
Between 1970 and 2008, real per capita income in the state grew at an average 2.1 percent per year. Over the next 22 years, growth is expected to be somewhat slower at an annual rate of 1.7 percent. Productivity increases and a favorable industrial mix in the state economy will support income growth. The expected decline in labor force growth and a lower employment-to-population ratio, both resulting from an aging population, will act to constrain per capita income growth in Washington and the nation.

Table 4-1, on the second page of this chapter, shows the long-term personal income forecast for Washington and the U.S. By 2030, real per capita income in Washington is expected to rise to $51,411, about 50 percent above the 2008 level.

Combining per capita income and population growth, total state personal income is expected to nearly double over the next 22 years, from $227.5 billion in 2008 to $440.8 billion in 2030 (in 2000 constant dollars). This represents an average annual growth rate of 3.0 percent during the forecast period, higher than the 2.8 percent rate projected for the nation (see Figure 4-5 on the following page). As a result, Washington's share of total national personal income increases from 2.3 percent in 2008 to almost 2.4 percent in 2030.

While this is at a lesser pace of growth than in the 1970-2008 span, several moderating influences will be felt during the forecast period. Continued above average population growth itself will be a moderating influence as higher income tallies are shared among a greater populace. Also, some components of the higher growth industries are not necessarily some of the best paying; a large share of the fast growing business services sector is comprised of administrative and support jobs, which tend to pay more modest wages relative to its professional, scientific, and technical jobs. In addition, the high-wage high-tech sectors of today will mature further over the next 22 years, which will tend to slow the fast-paced wage gains of their early years. Finally, the economies of our lesser-developed trading partners will also mature during this period, resulting in higher, but slower growing, incomes.

Figure 4-5
Growth of Real Total Personal Income



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As with all forecasts, this long term outlook is comprised of what is known. Those economic events that are as of yet unknown will inevitably reveal themselves, be it slowly and inexorably, or possibly in some technological leap forward. It is hoped that any such new activity will be a direct benefit to Washington's future economy.